



Comparable Valuation Fundamentals

Course Instructor



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EVP, Financial Modeling

Creative. Methodical. Meticulous.

Duncan is fascinated with pedagogy and loves course creation and design. He is an effective communicator with extensive experience teaching financial modeling, accounting, analysis & valuation.

Prior to teaching, Duncan held senior equity research positions with top banks & brokerages. He has solid analytical skills with an Engineering degree, a Master of Finance degree, and a CFA Charter.

Learning Objectives



Explain relative valuation as one of the valuation methodologies.



Compare the advantages and disadvantages of relative valuation.



Define how to screen comparable companies and precedent transactions.



Locate companies that are not directly comparable to the target company.



Identify the enterprise value equation used for relative valuation.



Interpret the appropriate equivalents to include in total debt and total cash.

Course Introduction

Why Value a Business or an Asset

Valuation is probably the most crucial aspect of finance and is used in the processes below.



Investment Purposes

Buy, sell, or hold a stock; Invest in a company project



Corporate Actions

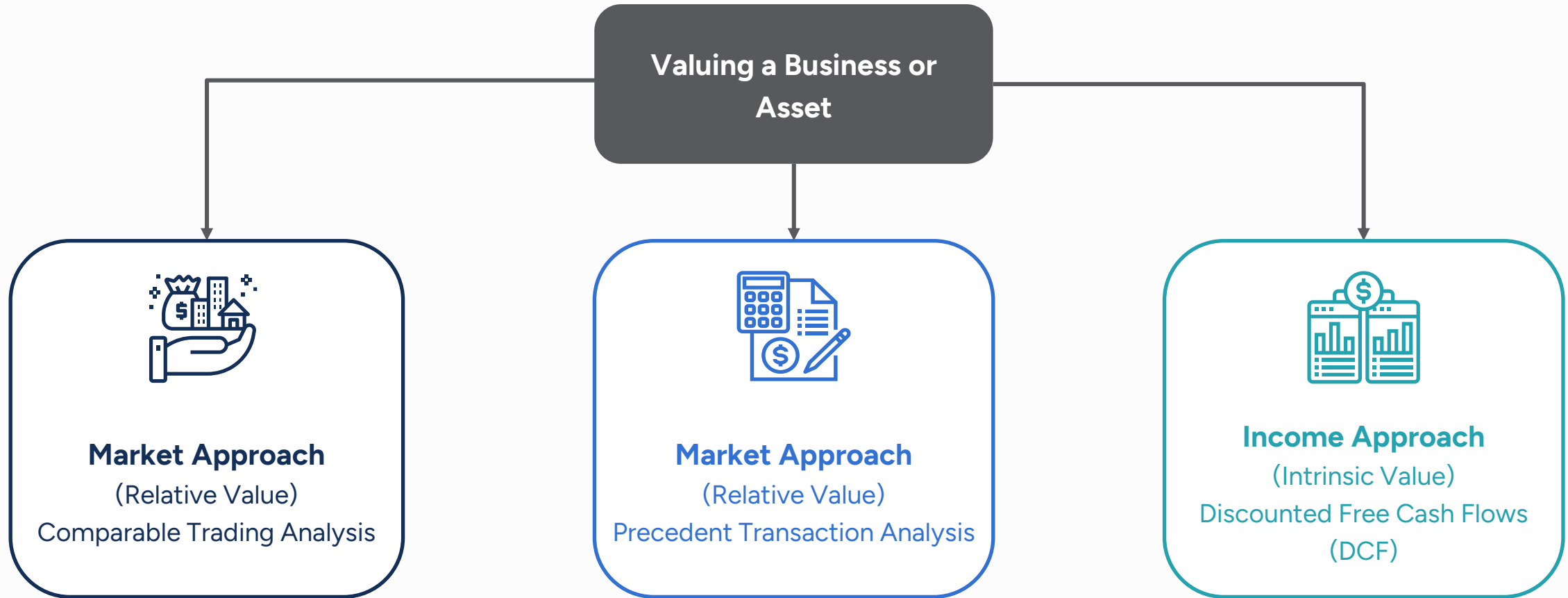
Purchase a company;
Sell a division



Certain Accounting Policies

Acquisition
accounting; Mark-to-
Market Accounting

Common Valuation Techniques



The market approach is also called relative valuation since valuation is relative to the company's peers.

Enterprise Value – Debt & Cash Totals

Net Debt

Let's look at an equation we can use to define and calculate the net debt of a company.

$$\begin{array}{rcl} = & \text{Net Debt} & \\ + & \text{Debt} & \text{We will define which items should be included in debt.} \\ - & \text{Cash} & \text{We will define which items should be included in cash.} \end{array}$$



Net debt is essentially the amount of debt remaining if all cash was used to retire debt.

Various Types of Debt

There are **many types of debt** that should be included in a calculation of the company's total debt.



**Long-term
Debt**



**Current Portion of
Long-term Debt**



**Revolving Line
of Credit**



**Commercial
Paper**



Debt may also include Notes, Bonds, Loans, and Borrowings.

What to Include in a Calculation of Total Cash

Let's look at a few different things that could be considered cash or cash equivalents.



**Cash
on Hand**



Cash Equivalents



**Marketable or Liquid
Securities**



**Items Quickly
Convertible to Cash**



Anything that could be quickly converted to cash with a minimal cost or discount should be included.

Enterprise Value – NCI & Investments in Affiliates

Enterprise Value Formula

The formula for enterprise value that is used for comparable analysis **can be difficult** to understand.

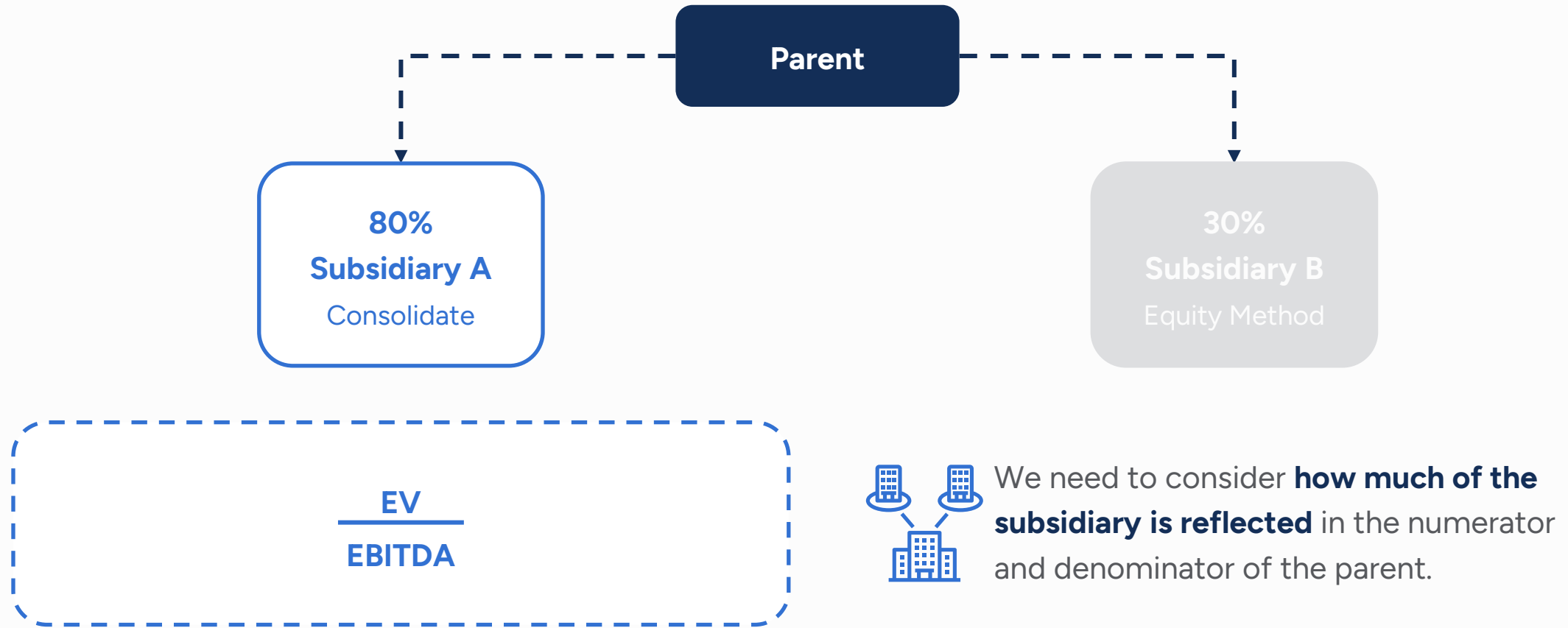
$$\begin{aligned} &= \text{Enterprise Value} \\ &+ \text{Common Equity} \\ &+ \text{Preferred Equity} \\ &+ \text{Net Debt} \\ &+ \text{NCI} \\ &- \text{Investments in Affiliates} \end{aligned}$$

If NCI is the portion of another business that the parent **does not** own, then why are we **adding** it to the enterprise value?

If investments in affiliates is the portion of another business that the parent **does** own, then why **subtract** it from the enterprise value?

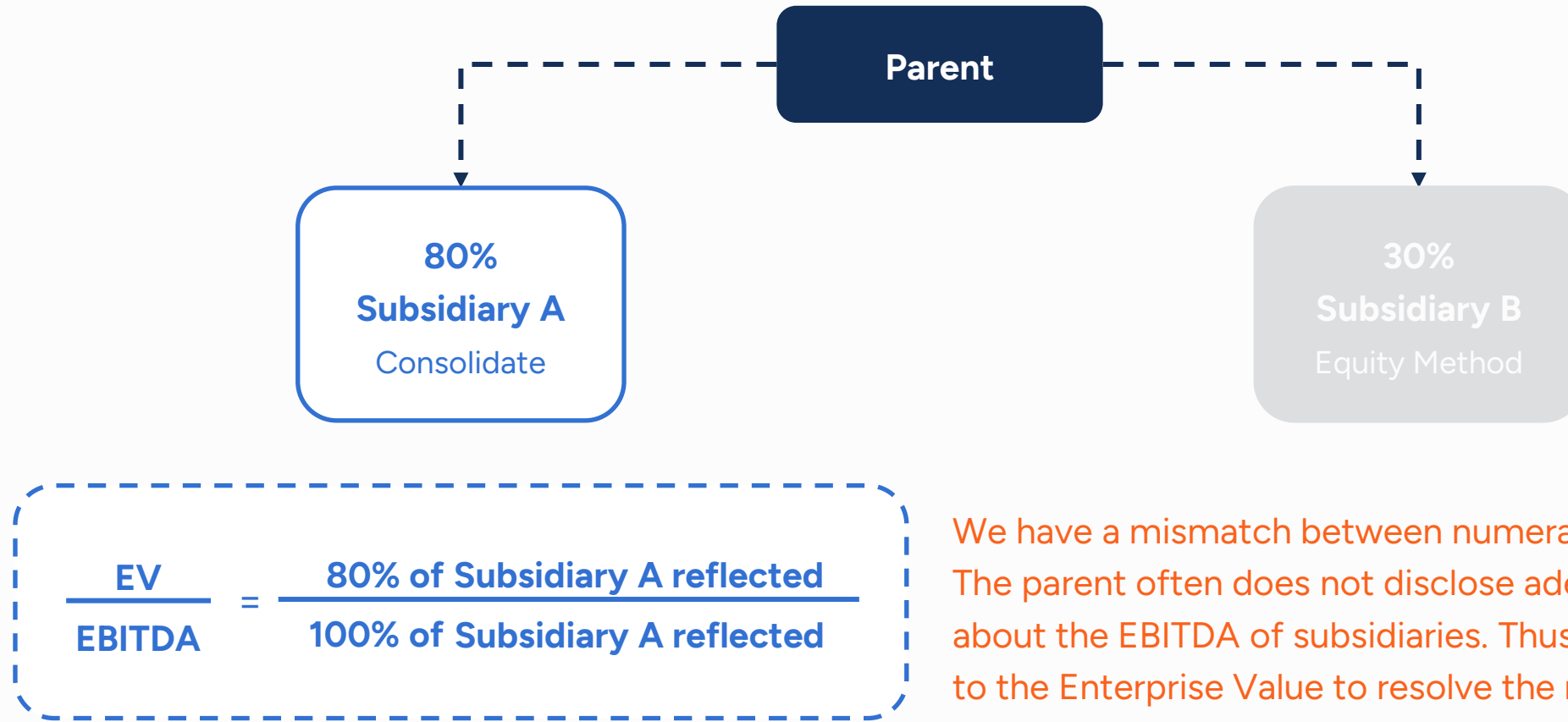
Non-Controlling Interest (NCI)

Let's look at an example where the parent company has reported an amount for NCI on its balance sheet.



Non-Controlling Interest (NCI)

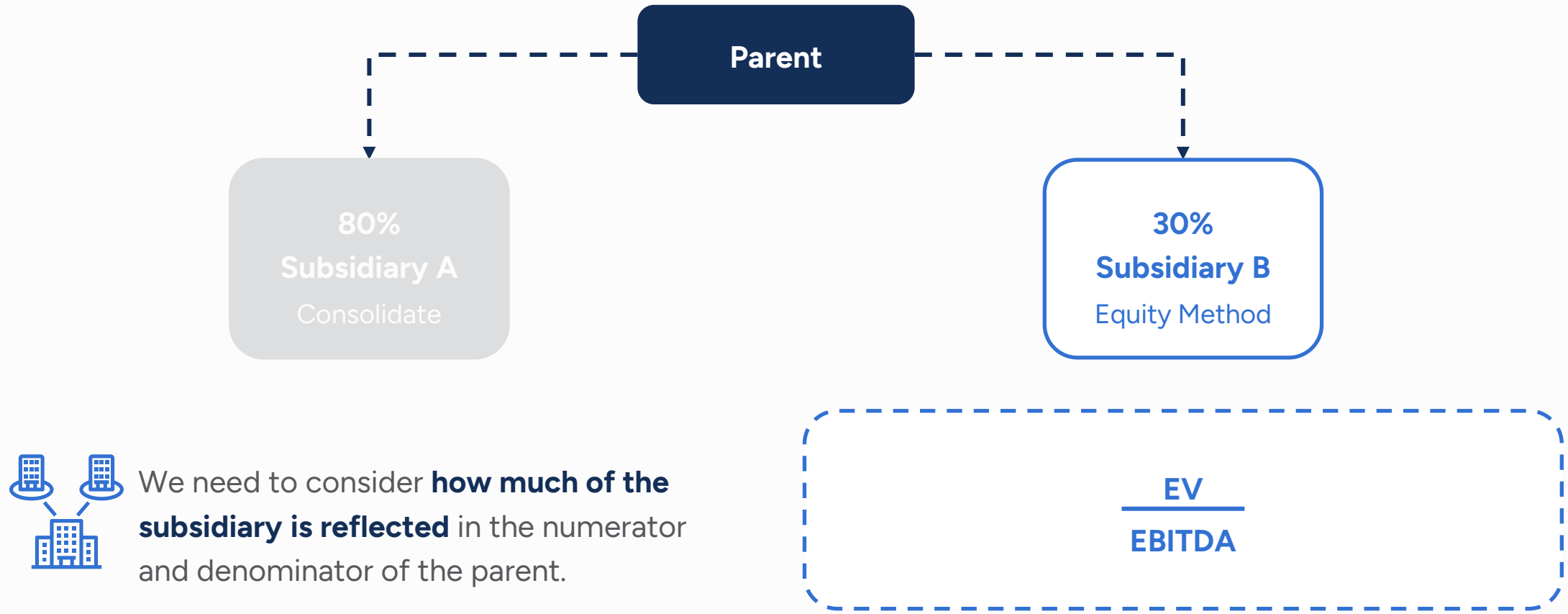
Let's look at an example where the parent company has reported an amount for NCI on its balance sheet.



We have a mismatch between numerator and denominator. The parent often does not disclose adequate information about the EBITDA of subsidiaries. Thus, we need to **add NCI** to the Enterprise Value to resolve the mismatch.

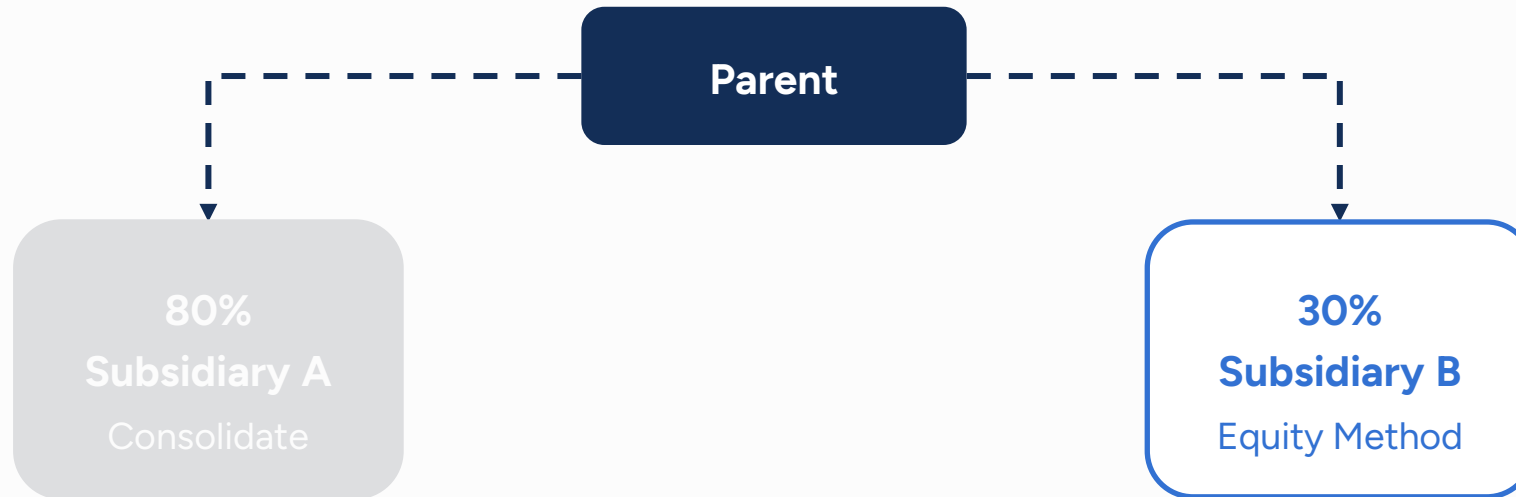
Investments in Unconsolidated Affiliates

Let's look at an example where the parent company has reported an amount for investments in affiliates.



Investments in Unconsolidated Affiliates

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We have a mismatch between numerator and denominator. The parent often does not disclose adequate information about the EBITDA of subsidiaries. Thus, we need to **subtract Investments in Affiliates** from the Enterprise Value.

$$\frac{\text{EV}}{\text{EBITDA}} = \frac{\text{30\% of Subsidiary B reflected}}{\text{0\% of Subsidiary B reflected}}$$

Last Twelve Months (LTM)

Timing Mismatch in EV/EBITDA Multiples

There is a timing mismatch that is inherent in the EV/EBITDA multiples that we should discuss.

$$\frac{\text{EV}}{\text{EBITDA}} = \frac{\text{EV is calculated as of the current date}}{\text{This is 12-months of EBITDA}}$$

We need to consider the **timing** of the EV in the numerator and the **timing** of the EBITDA in the denominator.

It is not practical to calculate the EBITDA as of one moment in time to remove the timing mismatch. Using a 12-month EBITDA estimate also captures any seasonality throughout the fiscal year. For this reason, the EBITDA is kept as a 12-month estimate.

Question: Should the denominator show EBITDA from the recent 12 months or the expected next 12 months?

Answer: We use the last twelve months (LTM) since these numbers are certain and have been audited.



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$$\frac{\text{EV}}{\text{EBITDA}} = \frac{\text{EV is calculated as of the current date}}{\text{This is 12-months of EBITDA}}$$

We have a timing mismatch between the numerator and denominator. We can't remove this mismatch since one is a **moment in time**, and the other is over a **12-month period**.

It is not practical to calculate the EBITDA as of one moment in time to remove the timing mismatch. Using a 12-month EBITDA estimate also captures any seasonality throughout the fiscal year. For this reason, the EBITDA is kept as a 12-month estimate.

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Calculating the Last Twelve Months (LTM)

Let's adjust reported data to the last twelve months, assuming the current date is **July 12, 2024**.



$$\text{LTM EBITDA: } 18,283 + 8,591 - 8,471 = \$18,403$$

Calculating EBITDA

Calculating EBITDA

We can calculate EBITDA by starting at the top of the income statement or starting at the bottom.



We will start from the bottom of the Income Statement in our Excel template.

Advantages & Disadvantages

Advantages & Disadvantages of Relative Valuation

Advantages

- ✓ Calculating and applying multiples is a relatively **simple** and **user-friendly** way of valuing a company.
- ✓ Avoids the potentially misleading precision of other valuation methodologies like DCF, so it's **harder to manipulate**.
- ✓ We can directly observe a public company's market capitalization, so the market data is **directly observable**.

Disadvantages

- ✗ While simplicity is an advantage, relative valuation can also be **too simplistic**.
- ✗ No two companies or transactions are **exactly alike**, making relative valuation more difficult.
- ✗ Even if you find good peer companies or transactions, sometimes information can be **hard to find** or **out-of-date**.

Locating Information

Where to Find Company Information

In order to learn about the target company, **read as much as possible**, including sector-specific material.



**Annual & Quarterly
Reports**



**Equity & Credit
Research**



Investor Presentations



**Earnings Conference
Transcripts**



Conference calls may offer great insight into the concerns or opportunities research analysts focus on.

Screening for Peer Companies

Business & Finance Characteristics

There are two main categories of **key characteristics**.



Business Characteristics

- Industry/Sector (Sub-sector)
- Geography
- Products/Services
- Customers
- Distribution network



Finance Characteristics

- Size
- Growth
- Margins
- Seasonality/Cyclicality
- Leverage/Credit rating

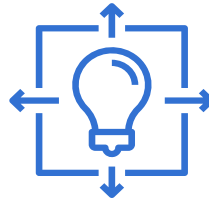
Selecting Appropriate Peer Companies

This is a **very important** step in comparable analysis, and you should spend **adequate time** on it.



Similar Risks Factors

You want to identify firms with risk factors similar to those of the 'target' firm.



No Peers?

If there are no peers, you can look outside of the target firm's sector.



Closest Comps

The valuation should be determined based on the closest comps.

Valuing Companies

Valuing Properties

If we were interested in buying a house, we may want to do some research to determine a **fair value** for it.

We could look at the sales of **other houses**, but they may have a wide range of values.

Thus, we may want to find a metric that we could use to **scale** the transactions to remove the impact of size.

An appropriate metric to consider for this case might be the **sales per square foot**.

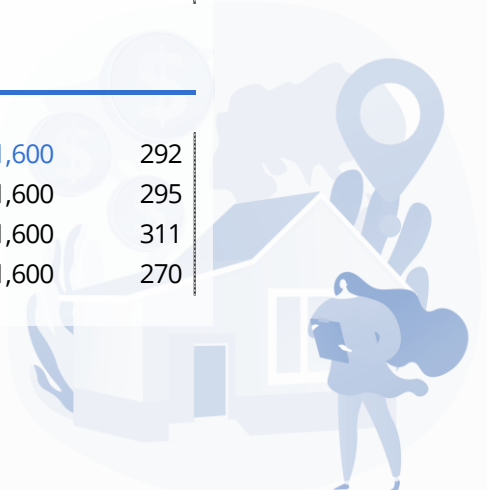
Valuing Properties

All figures in USD millions unless stated

Peer Houses	Sale Price	Square Footage	Sales / Sq Ft
House 1	879,000	2,911	302
House 2	455,100	1,686	270
House 3	675,000	2,199	307
House 4	550,200	1,904	289
House 5	345,000	1,250	276
House 6	980,200	3,152	311

Target House

Average	467,945	1,600	292
Median	472,743	1,600	295
Maximum	497,563	1,600	311
Minimum	431,886	1,600	270



Valuing Companies

If we were looking to invest in a company, we may want to do research to determine a **fair value** for it.

Looking at the levels where other companies are **trading** may yield a wide range of enterprise values.

With a wide range of values, we may **scale** the companies with a metric to remove the impact of size.

An appropriate metric in this case might be to look at the **EV / EBITDA** multiples.

Valuing Companies

All figures in USD millions unless stated

Peer Companies	Enterprise Value	EBITDA LTM ¹	EV / EBITDA
Company 1	89,762	5,189	17.3x
Company 2	12,905	838	15.4x
Company 3	35,897	2,162	16.6x
Company 4	55,781	2,905	19.2x
Company 5	99,340	6,851	14.5x
Company 6	15,671	1,045	15.0x

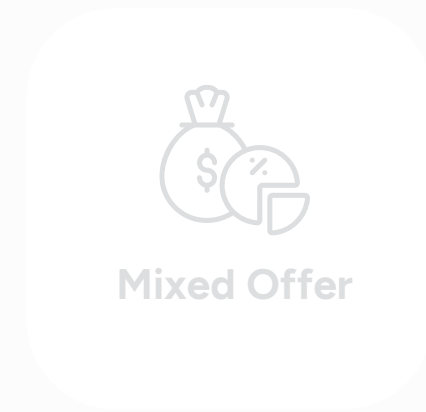
Target Company

Average	73,680	4,511	16.3x
Median	72,184	4,511	16.0x
Maximum	86,619	4,511	19.2x
Minimum	65,410	4,511	14.5x

LTM means Last Twelve Months. ⁽¹⁾

Merger Considerations

Merger Considerations



- The acquirer makes a cash offer for all the target's outstanding shares.
- **Total Consideration = Per-Share Amount x Target's Share Count**
- If the target is private, the all-cash offer will be a lump-sum amount.

Merger Considerations



All-Cash Offer



All-Stock Offer



Mixed Offer

- If the acquirer and the target company are both public, an 'exchange ratio' can be used.
- **Acquirer Shares to be Issued / Number of Target Shares to be Acquired**
- While there are different ways to structure an exchange ratio (fixed, floating, collared), we will assume it is a fixed exchange ratio.
- **Exchange Ratio x Acquirer's Share Price = Target Share Amount**

Merger Considerations



All-Cash Offer



All-Stock Offer



Mixed Offer

- The Mixed Offer accounts for both the **cash consideration** and the **stock consideration**.
- Our analysis will be set up to handle **all three structures**.

Premium Paid Analysis

An acquisition premium is the difference between the target's **market price** and the actual **price paid**.



- If the target is public, we also want to know the **premium paid** in the transaction.
- A premium is paid to **acquire control** of the target.
- If no premium were offered, selling shareholders would have **no incentive** to sell.
- Both the **acquirer** and **target** expect this premium.
- It is a **common measure** in mergers, acquisitions, and precedent transactions.

Other Considerations for Precedent Transactions



What type of buyer acquired the company? A strategic buyer or a financial buyer (PE Fund)?



What was the transaction value for acquisition?



Can we calculate the control premium that was paid?



Did the buyer assume synergies in the transaction? What were the total synergies?



We may need data from press releases, proxy information circulars, and investor presentations.



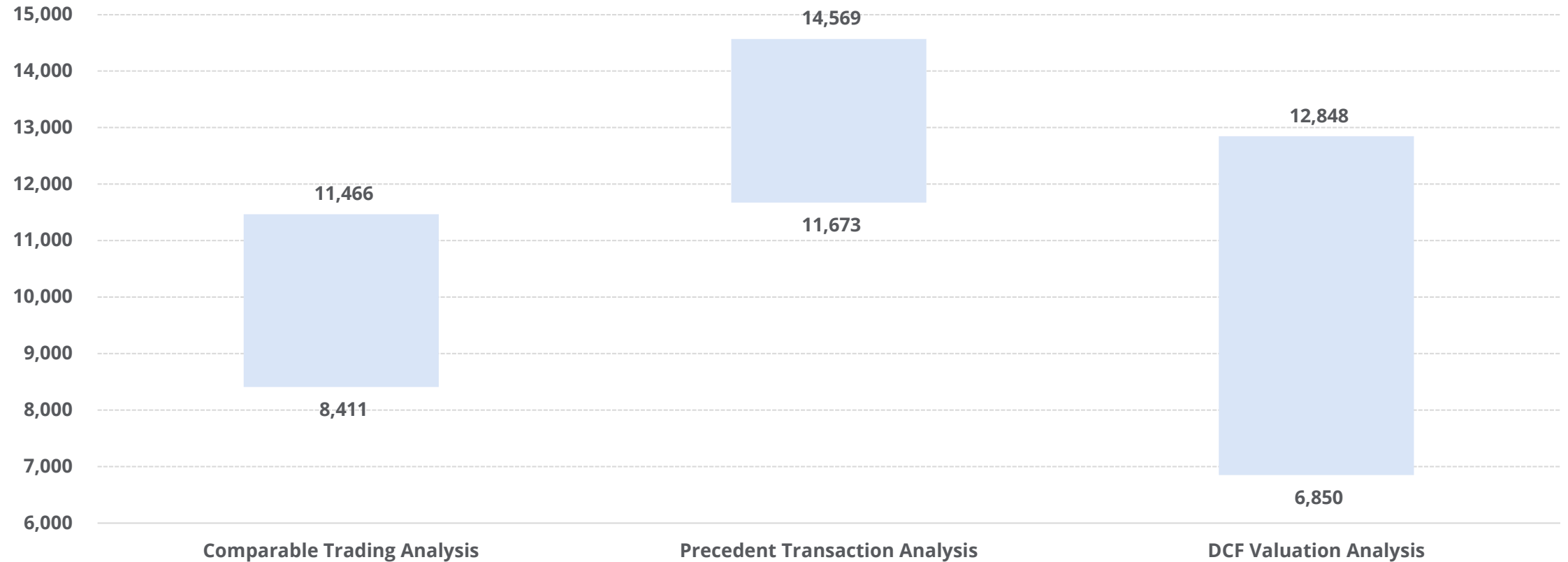
Some of these financial metrics may need to be provided.



Data for precedent transactions is often more difficult to find than for comparable trading analysis.

Summarizing Results

Football Field Chart



This is the **market's view** of value.

This is the **acquirer's view** of value.

This is **your view** of value.